

Let BC = a, AC = b, AB = c. Then:

$$1. \quad \sin \alpha = \frac{a}{c}$$

$$2. \quad \cos \alpha = \frac{b}{c}$$

$$3. \quad \tan \alpha = \frac{a}{b}$$

$$7. \quad \text{vers } \alpha = 1 - \cos \alpha$$

$$8. \quad \text{covers } \alpha = 1 - \sin \alpha$$

$$11. \quad a^2 + b^2 = c^2$$

$$13. \quad \text{Area} = \frac{1}{2} ab$$

$$4. \quad \csc \alpha = \frac{1}{\sin \alpha} = \frac{c}{a}$$

$$5. \quad \sec \alpha = \frac{1}{\cos \alpha} = \frac{c}{b}$$

$$6. \quad \cot \alpha = \frac{1}{\tan \alpha} = \frac{b}{a}$$

$$9. \quad \text{exsec } \alpha = \sec \alpha - 1$$

$$10. \quad \text{coexsec } \alpha = \csc \alpha - 1$$

$$12. \quad \alpha + \beta = 90^\circ$$

BASIC TRIGONOMETRIC FUNCTIONS

Figure 43-6B